

Geometry Opener Day 2

$\angle y = 35^\circ$ (S.A.T)
 $\angle x = 90^\circ$ (sum of int Δ)
 $\angle z = 75^\circ$ (sum of int Δ)
 $\angle y = 75^\circ$ (F pattern)
 $\angle z = 105^\circ$ (S.A.T)
 $\angle a = 30^\circ$ (S.A.T)
 $\angle b = 30^\circ$ (F pattern)

$2x + 15$
 $3x - 10$

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Opener

$y + 145 = 180^\circ$
 $y = 35^\circ$ (S.A.T)
 $x + 35 + z = 180$
 $2x + 120 = 180$
 $2x = 180 - 120$
 $2x = 60$
 $x = 30^\circ$ (S.A.T)
 $z = 105^\circ$ (S.A.T)
 $y + 30 + 75 = 180$
 $y + 105 = 180$
 $y = 180 - 105$
 $y = 75^\circ$ (S.A.T)
 $\angle x = 75^\circ$ (F pattern)
 $2x + 15 = 3x - 10$ (2 pattern)
 $15 = 3x - 2x - 10$
 $15 = x - 10$
 $15 + 10 = x$
 $25 = x$ (2 pattern)

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Opener

$\angle x = x + 35 + z = 180$
 $2x + 120 = 180$
 $2x = 180 - 120$
 $2x = 60$
 $x = 30^\circ$
 $\angle y = 180 - 145 = 35^\circ$
 $y = 35^\circ$ (S.A.T)
 $\angle z = 180 - 75^\circ$
 $\angle z = 105^\circ$ (S.A.T)
 $\angle y + 75 + 30 = 180$
 $\angle y + 105 = 180$
 $\angle y = 180 - 105$
 $\angle y = 75^\circ$ (sum of int Δ)
 $\angle x = 75^\circ$ (F pattern)
 $2x + 15 = 3x - 10$ (2 pattern)
 $+15 = 3x - 2x - 10$
 $15 = x - 10$
 $15 + 10 = x$
 $25 = x$

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Proofs Using Geometric Shapes 6.2

Exterior Angles of a Polygon

Remote Interior Angles

$\angle a + \angle b = \angle e$ (RIA)

May 10-9:57 AM

Proofs Using Geometric Shapes 6.2

Exterior Angles of a Polygon

$\angle a + \angle b + \angle c = 180^\circ$
 $\angle d + \angle e + \angle f = 360^\circ$
 (sum of ext polygon)

Remote Interior Angles

$\angle a + \angle b = \angle e$
 $\angle d = \angle b + \angle c$ (RIA)
 $\angle f = \angle a + \angle c$ (RIA)

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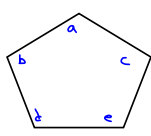
Sum of Interior angles of a polygon

$P = 180(n-2)$
 $n = \# \text{ of sides}$

Regular Polygons

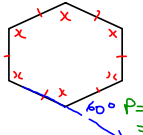
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Sum of Interior angles of a polygon



$P = 180(n-2)$
 $n = \# \text{ of sides}$
 $P = 180(5-2)$
 $P = 180(3)$
 $P = 540^\circ$

Regular Polygons



regular = all sides are =
 \therefore all angles are equal

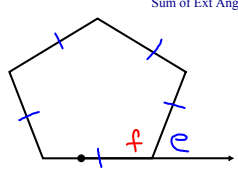
$P = 180(n-2)$
 $= 180(6-2)$
 $= 180(4)$
 $= 720^\circ$
 $\frac{6x}{6} = \frac{720^\circ}{6}$
 $x = 120^\circ$

$\frac{360}{6} = 60^\circ$

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Exterior Angles of a Polygon

Sum of Ext Angles of any polygon = 360



Find $\angle e$

$P = 180(5-2)$
 $P = 180(3)$
 $P = 540$

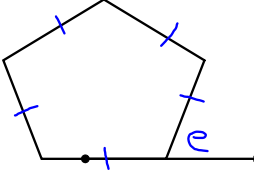
$f = 540/5 = 108$

$e = 180 - 108 = 72^\circ$
 (S.A.T.)

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Exterior Angles of a Polygon

Sum of Ext Angles of any polygon = 360



Find $\angle e$

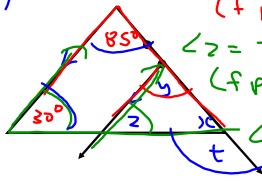
$\frac{360}{5}$
 $= 72^\circ$
 (sum ext of poly)

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Hmk Text
 p365-367 q 1-4, 6,8-11

May 10-10:11 AM

n)



$\angle y = 85^\circ$
 (f pattern)

$\angle z = 30^\circ$
 (f pattern)

$\angle x = 65^\circ$
 (sum of int Δ)

$\angle t = 115^\circ$
 (R.T.A.)

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